Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Amitriptyline (hydrochloride)

Catalog No: tcsc2751

Available Sizes

Size: 1g

Size: 5g

Specifications

CAS No:
549-18-8

Formula:
$C_{20}H_{24}ClN$

Pathway:
Membrane Transporter/Ion Channel

Target:
Sodium Channel

Purity / Grade:
>98%

Solubility:
H2O : ≥ 50 mg/mL (159.31 mM); DMSO : ≥ 100 mg/mL (318.61 mM)

Observed Molecular Weight:
313.86

Product Description

Amitriptyline Hydrochloride is a dibenzocycloheptene-derivative tricyclic antidepressant (TCA).

Target: Others

Amitriptyline acts primarily as a serotonin-norepinephrine reuptake inhibitor, with strong actions on the serotonin transporter and moderate effects on the norepinephrine transporter. It has negligible influence on the dopamine transporter and therefore does not

Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

affect dopamine reuptake, being nearly 1,000 times weaker on it than on serotonin [1]. Amitriptyline additionally functions as a 5-HT2A, 5-HT2C, 5-HT3, 5-HT6, 5-HT7, α1-adrenergic, H1, H2, and mACh receptorantagonist, and σ1 receptor agonist. It has also been shown to be a relatively weak NMDA receptor negative allosteric modulator at the same binding site as phencyclidine. Amitriptyline inhibits sodium channels, L-type calcium channels, and Kv1.1, Kv7.2, and Kv7.3 voltage-gated potassium channels, and therefore acts as a sodium, calcium, and potassium channel blocker as well [2]. Recently, amitriptyline has been demonstrated to act as an agonist of the TrkA and TrkB receptors. It promotes the heterodimerization of these proteins in the absence of NGF and has potent neurotrophic activity both in-vivo and in-vitro in mouse models [3].